AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A fuel cell system comprising:

a plurality of fuel cell stacks connected in parallel, each of said stacks supplying one of a plurality of currents for a load;

a plurality of inputs to and a plurality of outputs from each of said stacks that affect respective ones of said plurality of currents; and

a controller that produces a desired current through said load by ~~sequentially~~ adjusting ones of said currents in a predetermined sequence,

wherein said controller adjusts said currents by adjusting at least one parameter affecting at least one of said inputs and outputs.

2. (Original) The fuel cell system of claim 1 wherein said controller adjusts at least one of an anode input, an anode output, a cathode input and a cathode output.

3. (Previously Presented) The fuel cell system of claim 1 wherein the at least one parameter comprises at least one of pressure, humidity, stoichiometry, nitrogen dilution and temperature.

4. (Original) The fuel cell system of claim 1 wherein said stacks include equal pluralities of cells.

5. (Canceled)

6. (Original) The fuel cell system of claim 1 wherein said controller controls a first current through a first of said stacks and a second current through a second of said stacks, the second current controlled independently of the first current.

7. (Original) The fuel cell system of claim 6 wherein said controller controls the first and second currents based on set points proportional to active areas of said first and second stacks.

8. (Original) The fuel cell system of claim 1 further comprising a contactor connected between one of said stacks and the load.

9. (Currently Amended) The fuel cell system of claim 1 further comprising a current sensor that senses a current generated by one or more of said stacks;

wherein said controller uses said sensed current to determine ~~said~~ a gross load current.

10. (Currently Amended) The fuel cell system of claim ~~1~~ 9 wherein said controller uses said gross load current to determine a gross cathode stream mass flow rate.

11. (Original) The fuel cell system of claim 1 further comprising a pair of oxygen sensors that sense oxygen consumption by one or more of said stacks;

wherein said controller uses said sensed oxygen consumption to determine said gross load current.

12. (Original) The fuel cell system of claim 1 wherein a total power is adjusted by adjusting the plurality of parallel stacks.

13. (Currently Amended) A fuel cell system comprising:

a plurality of fuel cell stacks electrically connected in parallel, each of said stacks supplying one of a plurality of currents, which collectively supply a gross load current to a load, each stack comprising a plurality of inputs and outputs that are affected by a plurality of parameters; and

a controller that produces a desired current through said load by ~~comparing ones of said currents with an upper threshold and a lower threshold, and sequentially adjusting said compared currents~~ adjusting selected ones of said currents in a predetermined sequence until each of said ~~compared~~ currents is less than ~~said~~ an upper threshold and greater than ~~said~~ a lower threshold.

14. (Original) The fuel cell system of claim 13 wherein said controller produces a desired current from at least one of said stacks to the load.

15. (Previously Presented) The fuel cell system of claim 13 wherein said parameters comprises at least one of pressure, humidity, stoichiometry, nitrogen dilution and temperature.

16. (Original) The fuel cell system of claim 13 wherein said controller adjusts at least one of an anode input, an anode output, a cathode input and a cathode output.

17. (Currently Amended) The fuel cell system of claim 13 wherein said controller determines [[a]] the gross load current using ~~the determined~~ said currents, and balances said inputs based on the gross load current.

18. (Currently Amended) The fuel cell system of claim 13 wherein said controller determines [[a]] the gross load current using ~~the determined~~ said currents, and balances ~~a plurality of stack~~ said selected ones of said currents based on the gross load current.

19. (Currently Amended) A method for controlling current to a load supplied by a plurality of fuel cells, comprising:

combining the fuel cells to provide a plurality of fuel cell stacks, each fuel cell stack providing one of a plurality of currents to a load;

connecting the stacks in parallel; and

~~sequentially~~ adjusting ones of said currents in a predetermined sequence until each of said currents is less than ~~said~~ an upper threshold and greater than ~~said~~ a lower threshold,

wherein said adjusting comprises adjusting at least one parameter affecting said ones of said currents ~~at least one of said inputs and outputs~~.

20. (Currently Amended) The method of claim 19 further comprising using ~~the desired current through the given stack~~ said ones of said currents to provide a desired current to the load.

21. (Original) The method of claim 19 further comprising combining the fuel cells to provide stacks having equal pluralities of cells.

22. (Currently Amended) The method of claim 19 wherein ~~controlling at least one of an input to and an output from a given stack comprises controlling~~ said at least one parameter comprises at least one of pressure, humidity, stoichiometry, nitrogen dilution and temperature.

23. (Currently Amended) The method of claim 19 wherein ~~controlling at least one of an input to and an output from a given stack~~ adjusting one of said currents comprises ~~controlling~~ adjusting at least one of an anode input and a cathode input.

24. (Currently Amended) The method of claim 19 wherein ~~controlling at least one of an input to and an output from a given stack~~ adjusting one of said currents comprises:

determining a stack load current through at least one of the stacks; ~~and~~

determining the desired current through the given stack using the determined stack load current; and

adjusting said one of said currents based on said desired current.

25. (Currently Amended) The method of claim 19 wherein ~~controlling at least one of an input to and an output from a given stack~~ adjusting one of said currents comprises:

determining oxygen consumption across the given stack; and

determining the desired current through the given stack using said determined oxygen consumption; and

adjusting said one of said currents based on said desired current.

26. (Original) The method of claim 25 wherein said determining oxygen consumption comprises determining oxygen concentrations in a cathode inlet and outlet.

27. (Previously Presented) The method of claim 19 wherein controlling at least one of an input to and an output from a given stack comprises:

using said gross load current to determine a gross cathode stream mass flow rate.

28. (Original) The method of claim 19 further comprising controlling at least one input to a given stack to eliminate a current through the given stack.

29. (Original) The method of claim 19 further comprising controlling at least one input to a plurality of said stacks to control a plurality of currents through said plurality of stacks.

30. (Original) The method of claim 19 further comprising changing the plurality of parallel stacks to change power to the load.

31. (Currently Amended) A method for controlling current to a load supplied by a plurality of fuel cells, comprising:

combining the fuel cells to provide a plurality of fuel cell stacks, each of said stacks having a standard number of cells;

electrically connecting said stacks in parallel to provide a standard voltage range across each of said stacks;

obtaining desired set-points for current from each of said stacks; and

providing a desired current through said load by ~~sequentially~~ adjusting ones of said currents in a predetermined sequence until each of said currents reach a respective set-point;

said obtaining and regulating performed by controlling at least one of a plurality of parameters affecting at least one of an input to and an output from at least one said stack.

32. (Canceled)

33. (Previously Presented) The method of claim 31 further comprising:

determining a gross current through said load; and

balancing currents from the stacks based on said determined gross load current.

34. (Currently Amended) The method of claim 31 wherein ~~the desired~~ said respective set point for current from one of the stacks is proportional to an active area of the one of the stacks.

35. (Currently Amended) A method for controlling current to a load supplied by a plurality of fuel cells, comprising:

combining the fuel cells to provide a plurality of fuel cell stacks;

electrically connecting said stacks in parallel;

determining a gross current to the load; and

~~sequentially~~ balancing currents produced by said stacks in a predetermined sequence and based on said gross load current to provide a desired load current,

said balancing performed by adjusting one or more parameters affecting at least one of an input to and an output from at least one of said stacks for each of the stacks individually.

36. (Original) The method of claim 35 further comprising determining an oxygen consumption level in a stack to determine a current level across the stack.

37. (Original) The method of claim 36 wherein determining an oxygen consumption level comprises comparing oxygen concentrations in a cathode inlet and outlet.

38. (Original) The method of claim 35 wherein balancing currents produced by said stacks comprises determining a current through a stack to the load.

39. (Original) The method of claim 38 wherein said determining a current is performed using one of a current sensor and an oxygen sensor.

40. (New) A fuel cell system comprising:

N fuel cell stacks connected in parallel, each of said N stacks supplying a current for a load;

a plurality of inputs and outputs that are associated with each of said N stacks; and

a controller that produces a desired current through said load by sequentially selecting M ones of said N stacks based on a predetermined sequence and adjusting at least one parameter affecting at least one of said inputs and outputs associated with said selected ones of said N stacks,

wherein N and M are integers greater than one and M is less than or equal to N.